



# SAVING YOUR Treasures

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## **Gerald R. Ford Conservation Center Nebraska State Historical Society**

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### **THE REPAIR OF BROKEN CERAMICS OBJECTS BY CONSERVATORS**

The following are the basic steps used by conservators in the repair of broken ceramics. Each object brings its own unique set of problems and conditions, making it necessary for the conservator to evaluate, test, and develop a unique treatment protocol for each object.

1. When an object arrives at a conservation lab for treatment, the object is received and logged into the conservator's record keeping system. It is thoroughly examined in normal light and short and long wave ultraviolet light. Solvent tests are carried out using a battery of solutions on any old repairs or areas that look as though they may be covered with soil, paint, adhesives, or other materials that are not original to the manufacture of the piece. (Archeological ceramics are treated differently due to the likelihood that important cultural remains and residues may be present and must be preserved.)
2. A written examination report is prepared and a written treatment proposal is developed. These documents include a description of the object, an assessment of current condition, a review of testing and analysis carried out, reasons for treatment, and treatment steps proposed. The examination report and treatment proposal is forwarded to the owner, client, or curator for authorization before any work is begun.
3. Prior to treatment, the original condition of the item is documented with color and/or black and white slides and/or digital images.
4. Loose dust and dirt are removed with a soft brush. The surfaces of all the fragments are cleaned with the solvents or solutions chosen during testing.
5. All the break edges are consolidated and isolated so that the adhesive to be used to repair breaks cannot seep into the ceramic body. A stable transparent synthetic resin is used.
6. The broken ceramic fragments are joined using a reversible synthetic resin as an adhesive and the joints are physically immobilized until the adhesive has set. Stabilizers to immobilize the pieces may include pressure sensitive tape, clamps, weight bags, glass bead trays, and gravity. The repair step often requires many stages and may take many days. Some adhesives that over eight days to set.

## The Repair of Broken Ceramics Objects by Conservators

7. After the object is reassembled, losses are filled with a reversible fill material and allowed to thoroughly dry. Fill materials are chosen to reflect the strength, color, and texture of the original ceramic body. Often several fill campaigns are needed. When completed and dry, the fills are smoothed to match the surrounding areas, using files, scalpels, and abrasive papers. Once the fills are finished, they are sealed with a stable, synthetic resin.
8. Fills are visually reintegrated into the surrounding ceramic object using reversible paints and colorants that can be made to match the original surrounding surface colors, texture, and gloss. Visual reintegration is called inpainting. Inpainting materials are chosen for a variety of reasons including permanence, durability, longevity, color, colorfastness, texture, gloss, and solubility.
9. Following treatment, the condition of the object is documented with color and/or black and white slides and/or digital images. A written report that details the materials and techniques used during the project is prepared for the owner.

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